Examination of the Acute Adverse Event in Two Cycles of Neoadjuvant Chemotherapy with Docetaxel, Cisplatin, and 5-fluorouracil (TPF)

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Objective: The aim of this study was to evaluate the toxicity of neoadjuvant chemotherapy with docetaxel, cisplatin and 5-fluorouracil (TPF) in patients with squamous cell carcinoma of head and neck.

Materials and Methods: We treated 28 patients (25 men and 3 women) with squamous cell carcinoma of the oral cavity, larynx, oropharynx, nasopharynx, or hypopharynx. The median age was 56.6 years (range, 46-80 years). Patients received two cycles of neoadjuvant TPF therapy (docetaxel 50 mg/m², cisplatin 60 mg/m², 5-fluorouracil 600 mg/m²). The interval between the 1st and the 2nd cycles of neoadjuvant TPF was two to three weeks. The white blood cell count, red blood cell count, Hb, platelet count, AST, ALT, total protein, BUN, and serum Cr were compared between before and during the 1st and 2nd cycles of neoadjuvant TPF therapy. The incidences of anorexia, stomatitis and diarrhea were compared between the 1st cycle and the 2nd cycle of TPF therapy.

Results: There were statistically significant decreases of the white blood cell count ($P < 0.0001$), red blood cell count ($P < 0.0001$), Hb ($P < 0.0001$), platelet count ($P < 0.0001$), serum total protein ($P < 0.0001$), and BUN ($P = 0.0046$) during the 1st cycle and 2nd cycle of therapy as compared with the levels before the start of the chemotherapy. Furthermore, even more significant decreases of the red blood cell count ($P < 0.01$) and Hb ($P < 0.01$) were observed during the 2nd cycle of therapy as compared with those during the 1st cycle of therapy. There were no significant differences in the incidences of anorexia ($P = 0.44$), stomatitis ($P = 0.37$), and diarrhea ($P = 0.07$) between the 1st and 2nd cycle of therapy.

Conclusion: The 2nd cycle neoadjuvant TPF can be safely administered like the 1st, if caution is observed against a decrease of the red blood cell count and Hb.

Keywords : acute adverse event, neoadjuvant TPF, chemotherapy

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